



RISE

Retrofit information,
support & expertise

How to manage risk, remediation and warranties

Supply chain advice pack

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www.riseretrofit.org.uk



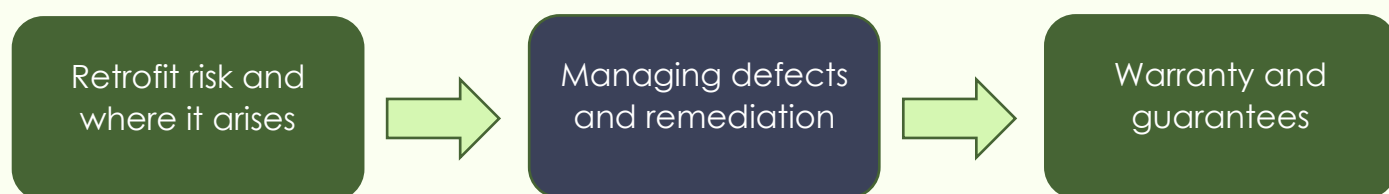
Introduction

Retrofit projects can deliver significant improvements in energy efficiency, resident comfort, health outcomes and carbon reduction. However, they also introduce a range of risks that can affect quality, compliance, programme delivery, resident satisfaction and long-term building performance.

Unlike many traditional construction projects, retrofit takes place in existing and often occupied homes. Unknown building conditions, interactions between measures, resident considerations and funding requirements all create additional complexity. Managing these factors effectively requires robust risk management processes, clear remediation pathways and appropriate warranty protection.

This advice pack provides practical guidance for organisations operating within the domestic retrofit supply chain. Whether you are a manufacturer, installer, contractor, retrofit coordinator or delivery partner, understanding how to identify, manage and mitigate risk is critical to delivering successful retrofit outcomes.

Readers that would like this document in a more accessible format should contact rise@turntown.co.uk.



Step 1: Understanding retrofit risk

Retrofit projects involve modifying existing buildings that were often constructed decades ago using methods and materials that may not be fully documented. Every property is unique and **hidden defects can remain undiscovered** until work begins.¹

Additional challenges can include:

- Occupied homes and resident disruption
- Unknown construction details
- Existing defects or disrepair
- Moisture, mould and ventilation issues
- Interactions between multiple retrofit measures
- Funding scheme compliance obligations
- Long-term performance requirements

¹ [TrustMark Retrofit Overview](#)

Unlike new-build construction, retrofit must work with the constraints of the existing building while protecting residents and ensuring the building performs safely after improvements are installed.

Key risk categories

Technical risks

Technical risks relate directly to the building and installed measures.

Examples include:

- Thermal bridging
- Condensation and moisture accumulation
- Inadequate ventilation
- Incorrect system design
- Product incompatibility
- Building fabric defects
- Poor installation quality



If not properly managed, technical risks can result in underperformance, resident complaints, remedial works and other unintended consequences.

Operational risks

Operational risks arise from the delivery of the project.

Examples include:

- Programme delays
- Resource shortages
- Supply chain disruptions
- Insufficient workforce competency
- Communication breakdowns
- Poor documentation control



Operational issues often have a direct impact on project cost, resident satisfaction and funding compliance.

Compliance risks

Retrofit projects must comply with a wide range of standards and requirements.

These can include:

- PAS 2030
- PAS 2035:2023
- TrustMark requirements
- Building Regulations
- Funding scheme rules
- Health and safety legislation



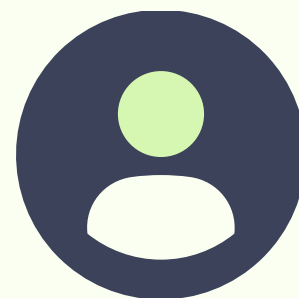
Non-compliance can lead to rejected claims, funding recovery, failed audits or reputational damage.

Resident-facing risks

Residents are central to retrofit delivery.

Risks may include:

- Poor communication
- Inadequate consent processes
- Resident disruption
- Vulnerable resident impacts
- Health and safety concerns
- Unmanaged expectations



Failure to address resident concerns can undermine project success regardless of technical quality.

Financial risks

Financial risks can affect all participants within the supply chain.

Examples include:

- Remediation costs
- Funding clawback
- Project overruns
- Contractor insolvency
- Warranty claims
- Insurance claims



Strong governance and assurance processes help reduce financial exposure across the project lifecycle.

Step 2: Learn how PAS 2035:2023 manages risk

PAS 2035 sets out the requirements for domestic retrofit projects and is designed to manage risk through a structured whole-dwelling methodology.²

Rather than considering measures individually, PAS 2035 examines how the home functions as a complete system. This helps identify interactions between measures and reduces the risk of unintended consequences.

For example, installing insulation without considering ventilation requirements can increase the likelihood of condensation and mould growth. The whole-dwelling approach seeks to avoid such issues.

² PAS 2035:2023 – Retrofitting Dwellings for Improved Energy Efficiency

Risk assessment and property evaluation

PAS 2035 requires comprehensive assessment before work begins.

This can include:

- Condition surveys
- Occupancy assessments
- Ventilation assessments
- Building performance analysis
- Retrofit risk pathway identification
- Assessment of existing defects

Early identification of risks allows mitigation measures to be incorporated into project planning and design.

The Retrofit Coordinator's role

The Retrofit Coordinator plays a critical role in risk management throughout the retrofit process.

Their responsibilities typically include:

1. Reviewing assessments and designs
2. Coordinating project information
3. Identifying risks and non-compliances
4. Managing quality assurance processes
5. Ensuring compliance with PAS 2035 requirements
6. Maintaining project records and evidence

The Retrofit Coordinator provides an important layer of independent oversight and assurance.

Key technical risk areas

Particular attention should be given to:

Moisture management

Moisture is one of the most significant risks in retrofit.

Potential causes include:

- Existing damp issues
- Reduced natural ventilation
- Inadequate extract ventilation
- Thermal bridging
- Water ingress defects



Ventilation

Improved airtightness can increase energy efficiency but may also create ventilation challenges.



Retrofit Designers should ensure:

- Adequate background ventilation
- Appropriate extract ventilation
- Compliance with Building Regulations
- Suitable commissioning and testing

Building performance

Risk management should consider how retrofit measures affect:

- Thermal performance
- Indoor air quality
- Resident comfort
- Energy consumption
- Building durability



Step 3: Set up practical risk management processes

Successful retrofit organisations embed risk management throughout project delivery rather than treating it as a standalone exercise.

A robust framework should include:

1. Identification
2. Assessment
3. Mitigation
4. Monitoring
5. Escalation
6. Continual review

Creating a Risk Register

A risk register provides a structured method of recording and tracking project risks.

Typical information includes:

- Risk description
- Potential impact
- Likelihood
- Severity rating
- Mitigation measures
- Risk owner
- Review date
- Current status

RISK REGISTER								
Risk Mitigation / Controls				Residual Risk Assessment			Risk Monitoring	
Response	Mitigation Action(s)	Risk Owner	Target Action Completion Date	Probability	Impact	Score / RAG Status	Status Update	Date Closed
Accept	Procurement processes and checks need to apply due to corporate compliance. Communicate it to the Board and to the vendor	Thomas J.	10-02-2023	Possible	Minor	6	Procurement actions completed on 10-04-2023	15-04-2023
Reduce	Ask the Sponsor to speak to the Head of Digital Transformation as why this project must be a priority. Create a status in a formal message	Rene T.	31-03-2023	Unlikely	Minor	4	Sponsor spoke to Head of Digital Transformation who has agreed to all work prior the monthly meetings and the initial workshops	16-04-2023
Reduce	Assign deputy resources that could shadow the work and take on the testing activities during August, negotiate timescales with the Sponsor	Thomas J.	02-06-2023	Almost Certain	Moderate	15	The Risk Management Action Plan is under review by the Board	17-04-2023
Reduce	Request a Low-Level Design Document to the vendor. Assign a Business Analyst to the project to facilitate workshops and requirements traceability	Thomas J.	02-06-2023	Unlikely	Minor	4	In conversations with the Business Analyst team to secure evidence. Vendor agreed to deliver a LL Design Document	18-04-2023

Example Risk Register. Source: Techno PM

The register should remain a live document throughout delivery.

Pre-installation checks

Many retrofit failures originate before installation begins.

Important pre-installation activities include:

Building condition surveys

These help identify:

- Structural defects
- Existing dampness
- Roof issues
- Defective building elements
- Previous retrofit measures

Design reviews

Design reviews can verify:

- Technical suitability
- Product compatibility
- Compliance requirements
- Resident needs
- Installation feasibility

Resident engagement

Residents should understand:

- Planned measures
- Potential disruption
- Expected benefits
- Programme timelines
- Reporting processes



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Example Resident Engagement Strategy. Source: Issuu

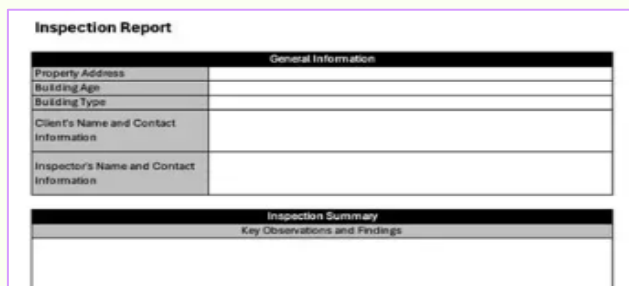
Strong engagement reduces misunderstandings and improves project outcomes.

Evidence collection and monitoring

Evidence supports compliance, quality assurance and future investigations.

Examples include:

- Survey reports
- Design documentation
- Photographic records
- Installation records
- Commissioning certificates
- Resident communications
- Inspection reports



Example Inspection Report. Source: Project Manager

Maintaining comprehensive records makes it significantly easier to resolve future disputes and remediation cases.

Step 4: Manage defects and remediation

What constitutes a defect?

A defect is any issue where work does not meet the required specification, quality standard or performance expectation.

Examples can include:

- Poor workmanship
- Non-compliant installations
- Product failures
- Incomplete works
- Missing documentation
- Performance failures

Not all defects present an immediate danger, but all should be investigated and managed appropriately.³

Identifying non-compliance

Non-compliance may be identified through:

1. Internal inspections
2. TrustMark audits
3. Resident complaints
4. Client reviews
5. Funding body checks (e.g. ECO4/GBIS)
6. Independent quality assurance assessments

Early identification significantly reduces remediation costs and programme disruption.

Developing a structured remediation process

An effective remediation process should include:

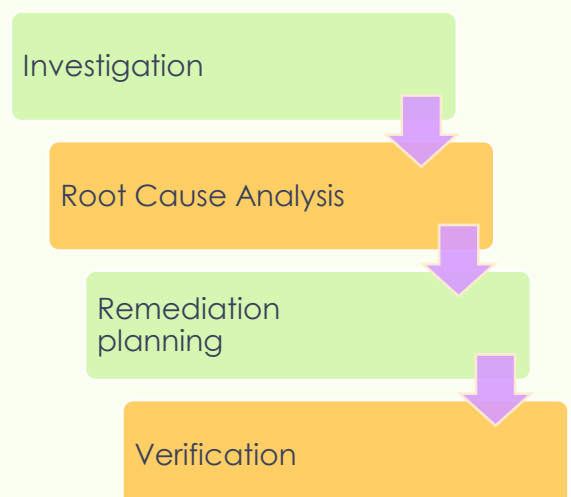
1 - Investigation

Gather evidence to understand the issue.

This may involve:

- Site inspections
- Photographs
- Video evidence
- Technical assessments
- Resident interviews

2 - Root Cause Analysis



³ [TrustMark Quality Assurance and Remediation Guidance](#)

Identify why the problem occurred.

Common causes include:

- Design errors
- Installation errors
- Product failures
- Poor supervision
- Communication failures

3 - Remediation Planning

Develop a clear resolution strategy covering:

- Proposed corrective actions
- Responsibilities
- Timescales
- Resident communication
- Associated risks

4 - Verification

Following remediation, organisations should verify that:

- The defect has been rectified
- Performance requirements have been achieved
- Compliance obligations have been met
- Necessary evidence has been updated

Step 5: Understand warranties, guarantees and IBGs

Protection Type	Provided by	Covers	Example
Product Warranty	Manufacturer	Product defects or failure	Heat pump warranty
Workmanship Guarantee	Installer	Installation quality and workmanship defects	EWI installation guarantee
Insurance Backed Guarantee (IBG)	Insurance provider	Honours workmanship guarantee if installer ceases trading	TrustMark-approved IBG

Why protection mechanisms matter

Retrofit measures are intended to deliver benefits over many years, often decades. Residents and clients need confidence that installations will continue to perform as expected and that problems will be resolved if they arise.

Step 6: Design strong assurance and protection arrangements

Assurance arrangements should be established early in the project and clearly define responsibilities across the supply chain. Contracts and project documentation should identify:

- Design responsibilities
- Installation responsibilities
- Defect rectification procedures
- Warranty and Insurance Backed Guarantee requirements
- Reporting and escalation routes
- Evidence collection and quality assurance requirements

Clear accountability helps reduce disputes, improve compliance and ensure issues are addressed promptly when they arise.

Protecting residents and clients

Residents and clients should understand:

- What warranties and guarantees are in place
- How long protection lasts
- How to report concerns or defects
- What remediation process will be followed
- Who is responsible for resolving issues

Providing clear information and maintaining open communication helps build trust and confidence throughout the retrofit journey.

Learning from defects and remediation

Every defect, audit finding or resident complaint presents an opportunity to strengthen future delivery.

Organisations should regularly review:

- Remediation cases
- Quality assurance findings
- Audit results
- Warranty claims
- Resident feedback
- Common installation issues

This information can be used to identify recurring problems, improve training and refine delivery processes.

Using data to improve delivery

Performance data should be collected and analysed throughout the project lifecycle to support continuous improvement.

This may include:

- Inspection outcomes
- Building performance data
- Resident satisfaction feedback
- Compliance findings
- Post-installation monitoring and evaluation

By understanding what works well and where issues occur, organisations can make evidence-based improvements that reduce risk and improve long-term outcomes.

Summary

Risk management, remediation and warranty protection are fundamental elements of successful retrofit delivery. Domestic retrofit presents unique challenges, including occupied homes, unknown building conditions, complex measure interactions and evolving compliance requirements. Without effective management, these challenges can result in technical failures, programme delays, funding issues and reduced resident confidence.

By adopting the principles of PAS 2035, implementing structured risk management processes, establishing clear remediation pathways and putting robust warranty and Insurance Backed Guarantee arrangements in place, supply chain organisations can significantly reduce delivery risks while improving quality and resident outcomes.

Resources



Podcast: All RISE podcasts are available [here](#).

Podcast: “navigating retrofit with data with Knauf” available [here](#).



Masterclass: All RISE masterclasses are available [here](#).

Masterclass: “Data: getting it right” available [here](#).



Advice pack: All RISE advice packs available [here](#).

Toolkit: “Property and Household Data Sources” available ([here](#)).



This pack aims to share insights, good practices, and lessons learned from the sector. It is intended for informational purposes only and does not constitute as recommendations or endorsements of specific suppliers, products, or services or as legal advice. Please always check the latest regulations.



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